

Work Order ID 48122

June 26, 2009 11:04:58 AM



Page 1

Item ID: D3391-025
Revision ID: H
Item Name: Aft Tube Assembly

Accept



Setup Start
Stop



Start Date: 15/07/2009 Start Qty: 1.00
Required Date: 03/08/2009 Req'd Qty: 1.00



Cust Item ID:
Customer:

Reference:

Approvals: Process Plan:
QC:

Date: Tooling:
Date: SPC (Y/N):

Date:
Date:

Run Start
Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3391	Rev H

100		0.00							
	MORI SEIKI CNC LATHE LARGE								
Mori Seiki	Memo	0.00							
Mori Seiki CNC Lathe Large	Turn as per Folio FA599	Rev: ____ & Dwg D3391 Rev: ____							

110		0.00							
	QC2- Inspect parts off machine FAI/FAIB								
QC	Memo	0.00							
Quality Control									

120		0.00							
	HAAS CNC VERTICAL MACHINING #1								
HAAS I	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine as per Folio FA 599 Rev: ____ & Dwg D3391 Rev: ____	02-Deburr							

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Stop



Start Date: 15/07/2009 Start Qty: 1.00
Required Date: 03/08/2009 Req'd Qty: 1.00



Cust Item ID:
Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 ✓ 0.00							
140 QC Quality Control	QC8- Inspect parts - second check Memo	0.00 ✓ 0.00							
150 Skidtubes Skidtubes	Skidtubes Memo 1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803	0.00 ✓ 0.00							

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Required Date: 03/08/2009 Req'd Qty: 1.00



Cust Item ID:
Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 CNC Bend I CNC Delta 100 Bender	BENDING MACHINE - SKIDTUBES Memo Form as per Dwg D3391 Using Bend Prog 3391025	0.00 0.00							
170 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
180 Skidtubes Skidtubes	Skidtubes Memo 1-Open Aft cap pilot hole to .208" as per Dwg D3391; 2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only); 3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217 Wearplate Jig *****Do Not Open To Finished Size***	0.00 0.00							

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Required Date: 03/08/2009 Req'd Qty: 1.00



Cust Item ID:
Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Run Start
Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
200 HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00							
210 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							

Work Order ID 48122

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Setup Start



Stop



Start Date: 15/07/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Stop



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

220

0.00



Skidtubes

0.00

Skidtubes

Memo

Instal spacers as per dwg D33910A/R Magnabond 6398
Batch: 7/1249 Exp. date: 10-21 Cure time 12hrs as per QSI0015

M 9-7-6

230

0.00



QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

Quality Control

240

0.00



White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Powdercoat

Memo

START TIME: 2:00pm OVEN TEMPERATURE:

320°F FINISH TIME: 2:30pm

pressure wash led

M 111472 sl 09-07-06 (X)

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Stop

Start Date: 15/07/2009 Start Qty: 1.00

Required Date: 03/08/2009 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

250

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

09-08-19 (2)

260

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts as per Dwg D3391
D3391 (1A/ R Sikaflex-241/-291 M112344
date: 10/20

2-Install Aft Cap as per Dwg
Sikaflex expiry

JP1

09-08-19 (X1)

270

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

=> 809/08/20

(40) 0

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Start Date: 15/07/2009 Start Qty: 1.00
Required Date: 03/08/2009 Req'd Qty: 1.00



Cust Item ID:
Customer:

Reference:

Run Start



Stop



Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

280

Identify as per dwg & Stock Location: *PP*

0.00



Packaging

Memo

5-27-09
51431

0.00

Packaging

290

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/09/08

u 31.07.07

Picklist Print

June 26, 2009 11:04:57 AM

Page 1

Work Order ID: 48122

Parent Item: D3391-025RevH

Parent Item Name: Aft Tube Assembly

Comments:

Start Date: 15/07/2009

Required Date: 03/08/2009

Start Qty: 1.00

Required Qty: 1.00

[illegible]

Picklist Print

June 26, 2009 11:04:57 AM

Page 2

Work Order ID: 48122

Parent Item: D3391-025RevH

Parent Item Name: Aft Tube Assembly





Comments:

Start Date: 15/07/2009

Required Date: 03/08/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
✓ D3553-1RevA 		Manufactured	No			260	Each	0.0000	1.0000			
Gasket												
✓ D3553-3RevA 		Manufactured	No			260	Each	0.0000	1.0000			
Gasket												
✓ D3670-4-200RevA 		Manufactured	No			260	Each	0.0000	4.0000			
SPACER												
✓ D3672-1RevB 		Manufactured	No			260	Each	0.0000	2.0000			
Phenolic Washer												

June 26, 2009 11:04:57 AM

Shop Packet Print

Page 2

Date: Friday, 22/05/2009 8:59:54 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : AFT TUBE ASSEMBLY
 Job Number : 48122
 Estimate Number : 10699
 P.O. Number :
 This Issue : 22/05/2009 S.O. No. :
 Prsht Rev. : NC Part Number : D3391025
 First Issue : // Type : SKIDTUBES Drawing Number : D3391 REV H
 Previous Run : 48121 Project Number : N/A
 Material :
 Due Date : 28/05/2009 Drawing Revision : H
 Qty: 1 Um: Each

Written By :
 Checked & Approved By : 210 09.05.25
 Comment : Est Rev B 06-02-07 ECN773 dwg rev. D EC
 Est Rev:C 06-03-28 Update Manuf. Instructions JLM

est rev D 07.03.20 revF dwg EC
 est rev E 07.11.07 rev G dwg ecn 1053p EC verified by:
 DD
 Est Rev:F 07-11-13 ECN 1056 DD verified by: EC
 Est Rev:G 08-09-10 revH as per dwg DD verified by:EC
 Est Rev:H 09-04-08 Added QC8 at Lathe as per NCR 09-028
 JLM Verified By:DD

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0

D6014090

ALUMINUM EXTRUSION



Comment: Qty.: 1.0000 f(s)/Unit Total : 1.0000 f(s)

ALUMINUM EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D6014-090	Extrusion	542768

Identify as D3391-3

Q.m 09.06.02

2.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

Turn as per Folio FA599

Rev: AA & Dwg D3391 Rev: H

Q.m 09.06.02

3.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

Q.m 09.06.02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 22/05/2009 8:59:54 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 48122

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

QC8

SECOND CHECK



Comment: SECOND CHECK

50806/22 (20)

5.0

HAAS1

HAAS CNC VERTICAL MACHINING #1



Comment: HAAS

1-Machine as per Folio FA 599 Rev: H & Dwg D3391 Rev: H

88 09/06/18

2-Deburr

MANE 09/06/17

6.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

88 09/06/18

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

2 09/06/19

8.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

2 H 9-6-22

9.0

BENDING

BENDING MACHINE - SKIDTUBES



Comment: NC Bender

Form as per Dwg D3391 Using Bend Prog 3391025

1 H 9-6-22

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

L=4.9"
h=4.3"

5 09/06/22

11.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217 Wearplate Jig .

*****Do Not Open To Finished Size*****

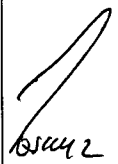

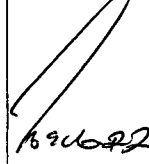
9-6-23
PW

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
0906-22	11.1	The aft cap holes were drilled 0.140" too much towards the aft. Jig was not positioned correctly. cc=		Drill the front wing holes as per dwg, NOT locating off of the aft cap holes. Aft cap holes are acceptable. see attached e-mail.	H 26-27	S 2/07/02		

NOTE: Date & initial all entries

Date: Friday, 22/05/2009 8:59:54 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 48122

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2 previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe, wearplate to 0.297" and float bag holes to 0.328" as per Dwg D3391.

7-Deburr

Tools: rill

12.0 ✓ QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

13.0 ✓ HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

14.0 ✓ QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

15.0 ✓ D36704200

SPACER



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

SPACER

batch: B 4666 9 M 9-6-23

16.0 ✓ SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Instal spacers as per dwg D3391

A/R Magnabond 6398 Batch: M111249

exp. date: 10-2-1

cure time 12hrs as per QSI0015

M 9-7-6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 22/05/2009 8:59:54 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 48122

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

17.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Serial 66 (R)

18.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME: 2:00pm

OVEN TEMPERATURE: 320°F

FINISH TIME: 2:30pm

09-07-06 (KL)

19.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Q.1 09-08-18 (B)

20.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Aft Cap

Pick:

Qty Part Number Description Batch

1 D2646 Aft Cap

B 46327 * JH

21.0

D35371

Wearpad



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARPAD

B 48288 * JH

22.0

D35377

Wearpad



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Wearpad

B 33869 * JH

23.0

D35531

Gasket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Gasket

B 33868 * JH 09-08-19 (KL)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 22/05/2009 8:59:54 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 48122

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

✓ D35533

Gasket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Gasket

B 33870

X

ju

25.0

✓ D36721

Phenolic Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

PHENOLIC WASHER

B 42329

X

ju

26.0

✓ ALS41032130

Insert



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

INSERT

batch:

M110511

or equivalent per

QSI 017

X

ju

27.0

✓ ALS41032225

Insert



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

INSERT

or equivalent

Per QSI 017

M 110768

X

ju

28.0

✓ AN3C4A

BOLT



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)

Bolt

Pick:

Qty

Part Number

Description

Batch

2

AN3C4A

Bolt

M112314

ju

X

29.0

✓ AN3C5A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

M 111707

X

ju

09-08-18

X

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 22/05/2009 8:59:55 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT TUBE ASSEMBLY

Job Number: 48122

Part Number: D3391025

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

✓ AN960C10L

washer



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Inventory

Pick:

Qty	Part Number	Description	Batch
2	AN960C10L	Washer	M112116

✓ M112116

09-08-19

31.0

✓ HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: SMALL & MEDIUM FAB RESOURCE 1

✓ 1-Install inserts as per Dwg D3391

✓ 2-Install Aft Cap as per Dwg D3391

A/R Sikaflex-241/-291 M112391

Sikaflex expiry date: 10/00

09-08-19 (X)

32.0

✓ QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/06/20 (X)

33.0

✓ PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

FP

34.0

✓ QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W 09-09-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 48122
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: H	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

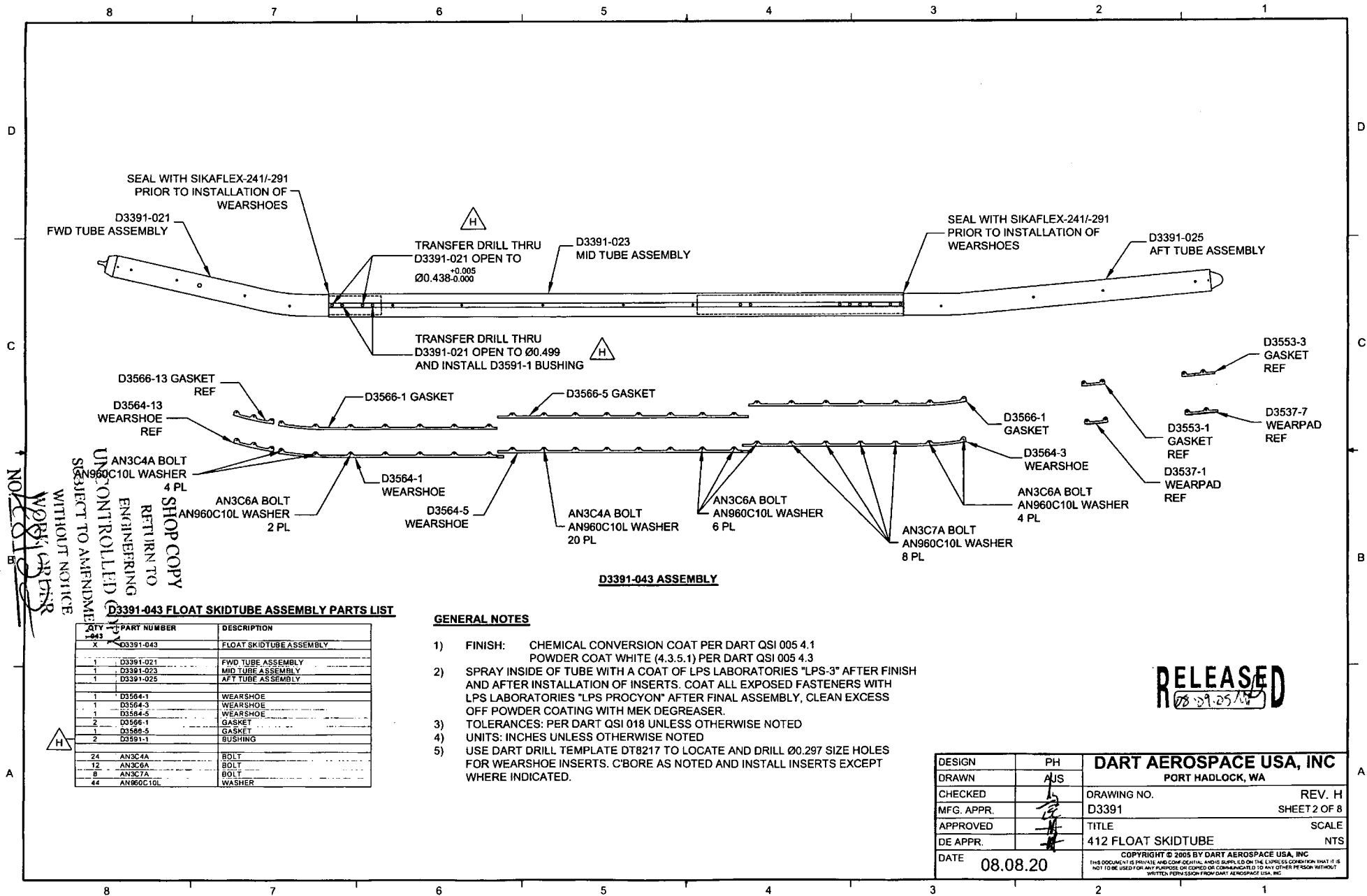
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.000	✓			
3.500	+/-0.010	3.495	✓			
88.93	+/-0.030	88.930	✓			
44.995	+/-0.030	44.995	✓			
Ø3.200	+/-0.010	3.199	✓			
88.93	+/-0.030	88.930				
Ø3.750	+/-0.010	3.750	✓			
30° x 160" chamfer	+/-0.010					

Measured by:		Date:	
Audited by:		Date:	

HAAS Section						
1.526	+0.000/-0.030	1.528				
0.200	+/-0.010					
7.500	+/-0.010	7.500				
27.750	+/-0.010	27.750				
31.750	+/-0.010	31.750				
35.250	+/-0.010	35.250				
3.300	+/-0.010	3.300				
0.200	+/-0.010	.200				
3.520	+/-0.010	3.520				
0.687	+0.010/-0.000	.695				
R0.062	+/-0.010	.062				
Ø0.484	+0.005/-0.001	.434				

Measured by:	JP	Date:	07/06/16
Audited by:	SL	Date:	07/26/19

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	



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D3391-043 ASSEMBLY

D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

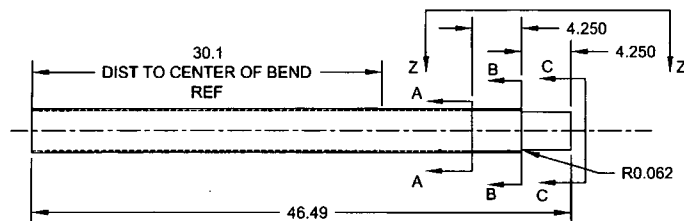
QTY	PART NUMBER	DESCRIPTION
1	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER

GENERAL NOTES

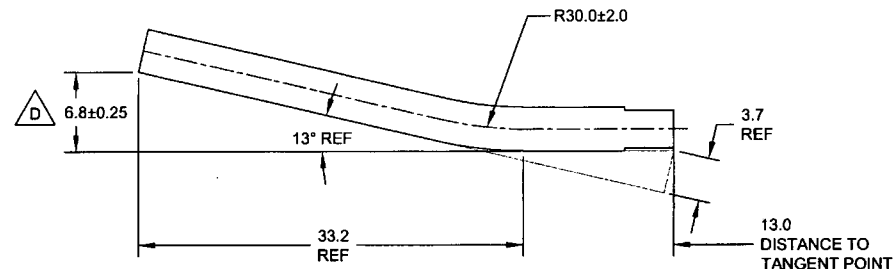
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C-BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

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 08-09-25/14

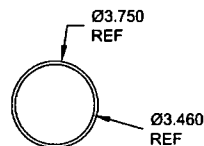
DESIGN	PH	DART AEROSPACE USA, INC	
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MFG. APPR.		D3391	SHEET 2 OF 8
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DE APPR.		412 FLOAT SKIDTUBE	NTS
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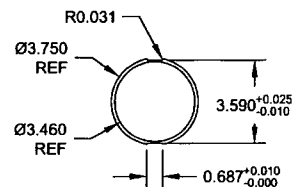
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



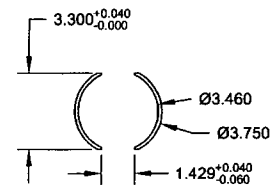
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



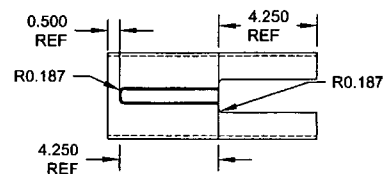
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X

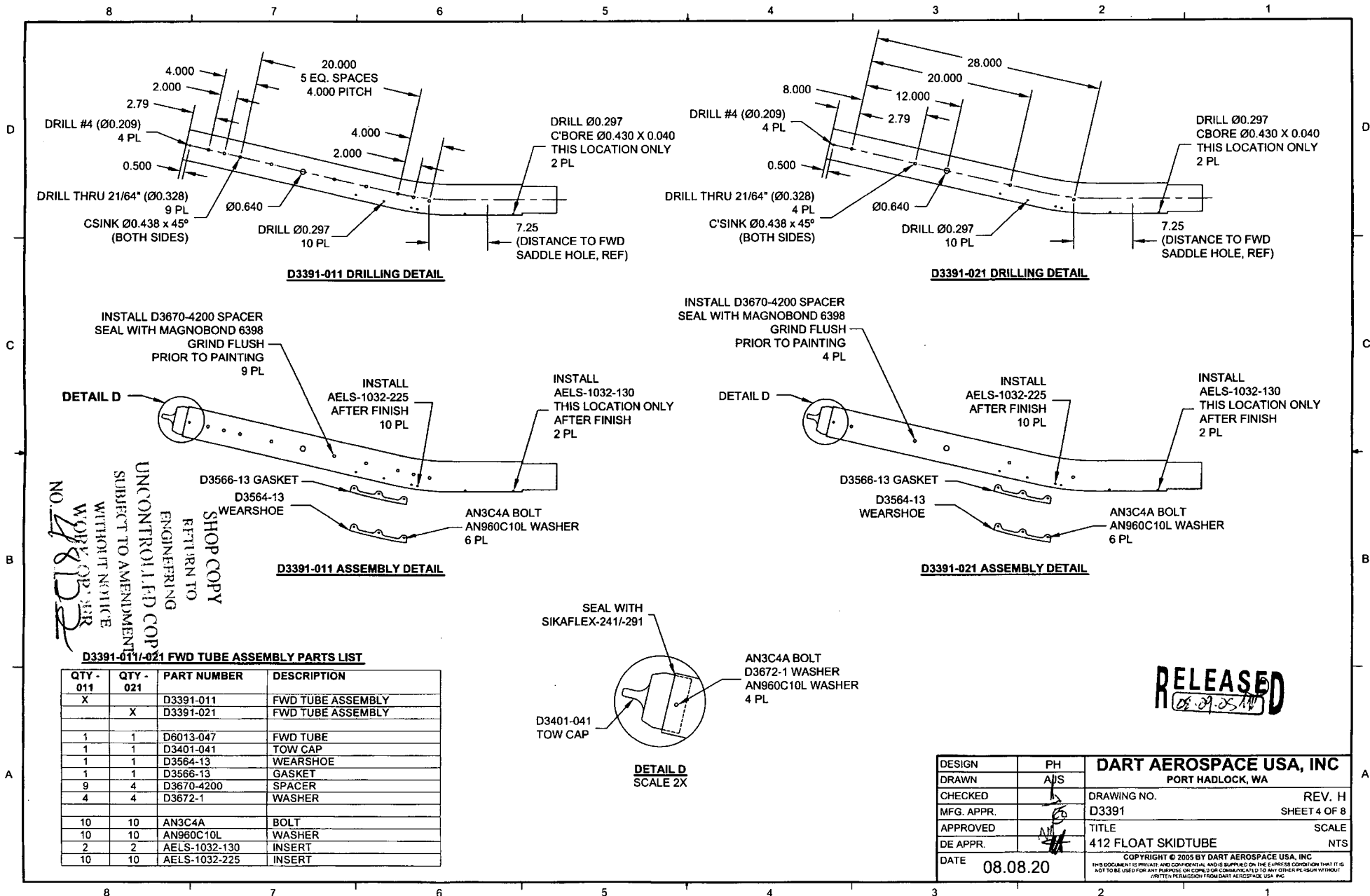


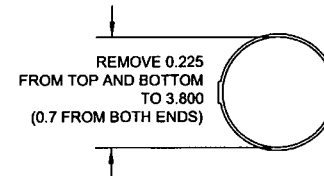
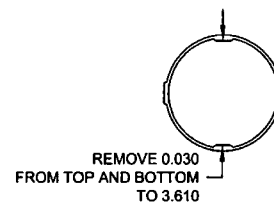
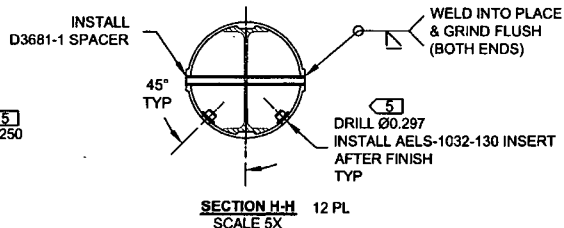
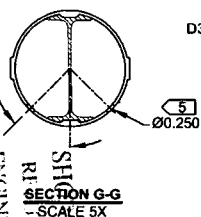
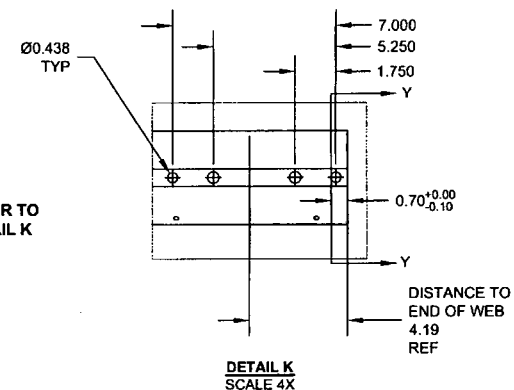
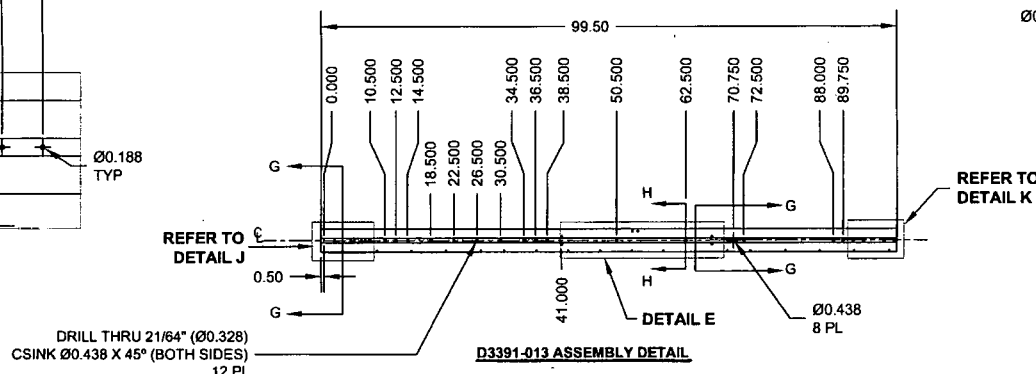
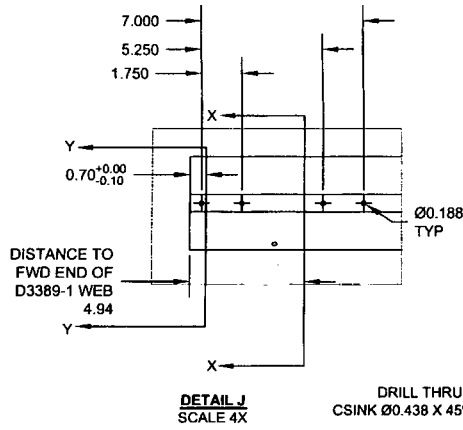
VIEW Z-Z
SCALE 2X

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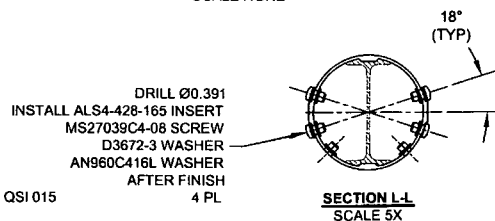
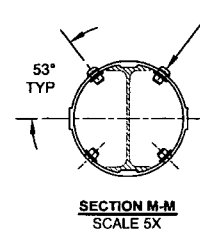
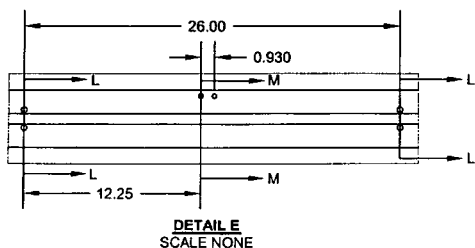
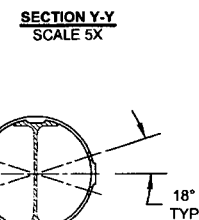
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DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL



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D3391-013 MID TUBE ASSEMBLY PARTS LIST

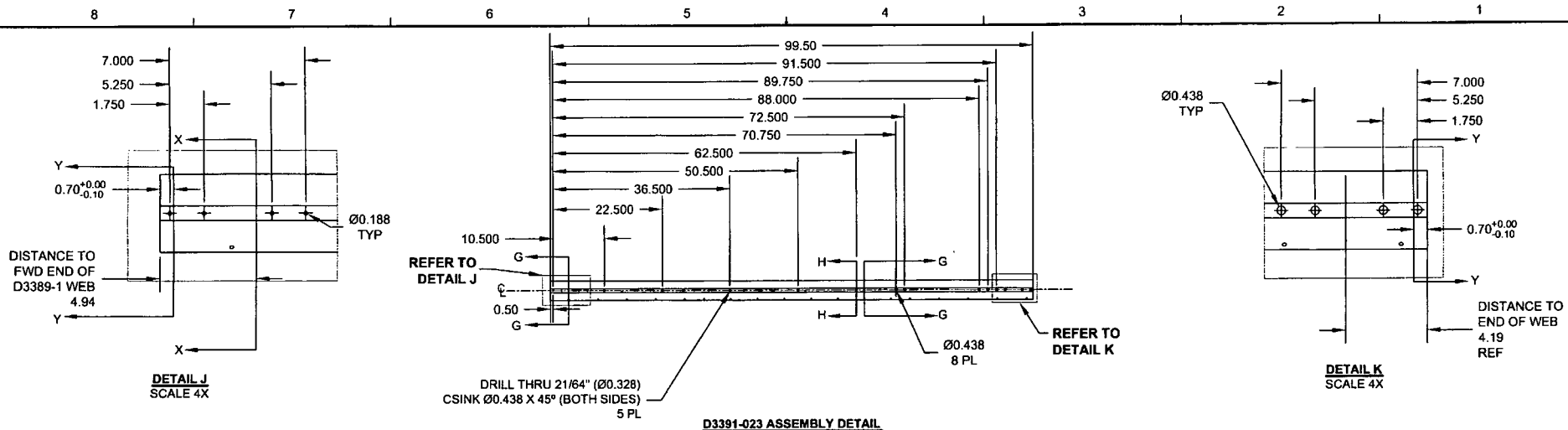
QTY	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

D3391-013 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

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DETAIL J
SCALE 4X

DETAIL K
SCALE 4X

D3391-023 ASSEMBLY DETAIL

SECTION G-G
SCALE 5X

SECTION H-H
SCALE 5X

SECTION X-X
SCALE 5X

SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT





D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

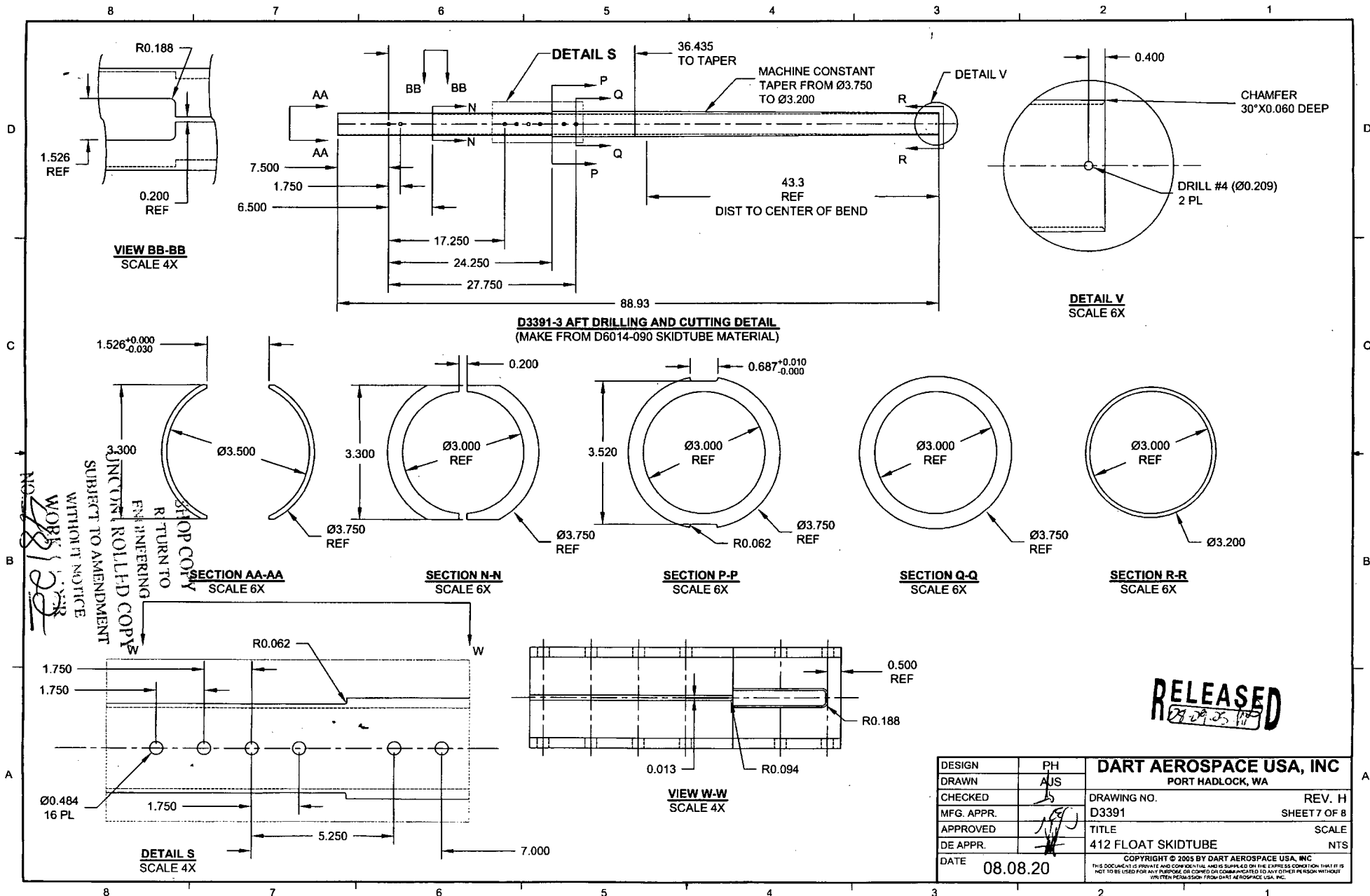
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TO 3.800
(0.7 FROM BOTH ENDS)

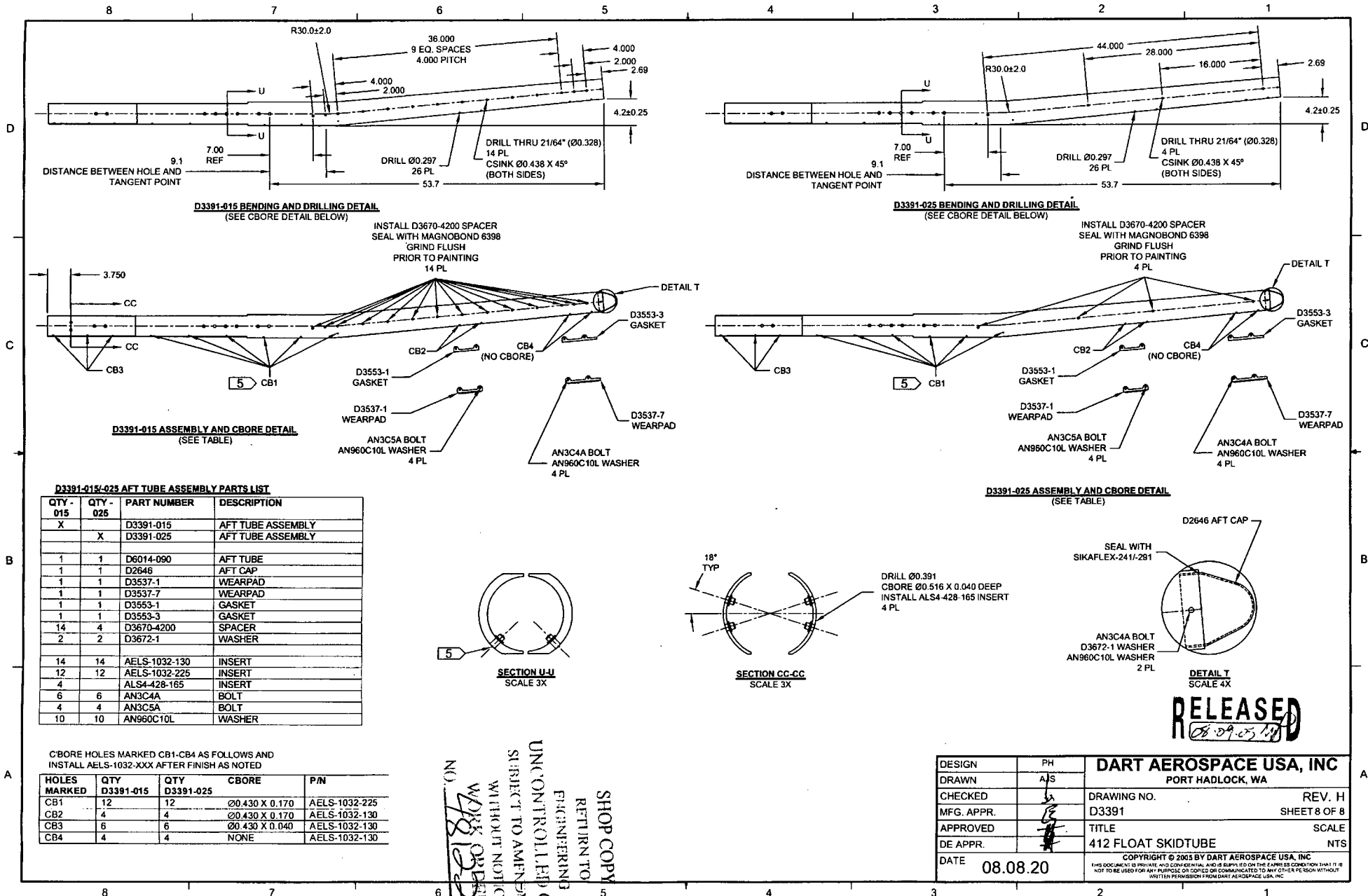
REMOVE 0.030
FROM TOP AND BOTTOM
TO 3.610

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WORK IN PROGRESS
NO 18-08-20





Jason Murdoch

From: Jason Murdoch [jmurdoch@dartaero.com]
Sent: June 22, 2009 2:19 PM
To: 'Peter Hum'
Cc: 'Melanie'
Subject: RE: D3391-025 aft tube

10-4 that's what I was thinking as well.
Thank you very much.

Jason Murdoch

Qc. Coordinator

jmurdoch@dartaero.com

From: Peter Hum [mailto:phum@dartaero.com]
Sent: June 22, 2009 2:08 PM
To: 'Jason Murdoch'
Cc: 'Melanie'; 'L Lacelle'
Subject: RE: D3391-025 aft tube

Jason,

I had a look at the parts affected.....I'm at a loss to figure out what happened. You are correct, the aft cap is non-structural.

The deviation on the location for the aft cap mounting is acceptable. However the float bag hole locations **MUST** be per drawing.

Peter

From: Jason Murdoch [mailto:jmurdoch@dartaero.com]
Sent: Monday, June 22, 2009 12:48 PM
To: 'Peter Hum'
Cc: 'Melanie'; 'L Lacelle'
Subject: D3391-025 aft tube
Importance: High

Hi Petey,

Do you mind going to see Jamie Rainey in the skid dept. He somehow drilled the aft cap holes, 0.140" too far back. The aft cap still fits in the hole, but due to the way the jigs locate, it will move the bag holes aft the same way. This can also be corrected by measuring off the aft saddle hole 7", and starting from there.

Let me know, and please see him as soon as you can, I do not see this as being scrap, nor a structural investigation, but I cannot accept this as it is out of my tolerance.

Thanks,

Jason Murdoch

Qc. Coordinator

jmurdoch@dartaero.com

23/06/2009